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January 23, 2007

**VIA FACSIMILE**  
**(27 Pages Total)**

To: Examiner Stephen J. Castellano  
Group Art Unit No. 3781  
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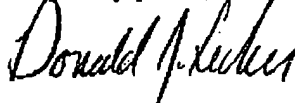
Re: Enclosed Re-Submission of Certified Translation of Priority Document and Statement  
U.S. Patent Application Serial No.: 10/813,054  
Our Reference: NGB.385

Dear Examiner Lhymn:

Enclosed is a Re-Submission of Certified Translation of Priority Document and Statement which was originally filed on November 27, 2006. Please enter these papers that are a true copy of the papers filed on November 27, 2006, which should place the above-referenced case in condition for allowance.

Thank you in advance for your kind consideration on this case.

Very truly yours,



Donald J. Lecher

DJL/SMM/jr  
Enclosure

**CERTIFICATE OF TRANSMISSION**

I certify that I transmitted via facsimile to (571) 273-8300 the enclosed Re-Submission of Certified Translation of Priority Document and Statement to Examiner Eugene Lhymn, Art Unit 3727 on January 23, 2007.

  
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NG 385  
Serial Number: 10/83,054

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Applicant's Name: Vashtaka Fukushima Application Filing Date: 03/31/04

Papers Filed Herewith:

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<input checked="" type="checkbox"/> Amendment	<input type="checkbox"/> Notice of Appeal	<input type="checkbox"/> Appeal Brief (in triplicate)
<input type="checkbox"/> Notice of Appeal	<input type="checkbox"/> 1449 Form w/ Documents	<input checked="" type="checkbox"/> Priority Document(s)
<input type="checkbox"/> ID	<input type="checkbox"/> Assignment	<input type="checkbox"/> Recordation Cover Sheet
<input type="checkbox"/> Assignment	<input checked="" type="checkbox"/> Drawing Corrections	<input type="checkbox"/> Formal Drawings
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Docket No.: F05-169600M/MKO  
(NGB.385)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

JAN 23 2007

In re Application of

FUKUSHIMA, Yoshitaka

Serial No.: 10/813,054

Group Art Unit: 3727

Filed: March 31, 2004

Examiner: LHYMN, Eugene.

For: FUELTANK STRUCTURE

Honorable Commissioner of Patents  
Alexandria, VA 22313-1450

**RE-SUBMISSION OF CERTIFIED TRANSLATION  
OF PRIORITY DOCUMENT AND STATEMENT**


Sir

Please see the enclosed Re-Submission of Certified Translation of Priority Document, Statement, and date-stamped post card. These are copies of the originally submitted documents filed in the U.S.P.T.O. on November 27, 2006 along with the after-final Amendment Under 37 C.F.R. §1.116. It appears that these documents were never scanned by the U.S.P.T.O. and placed in the file wrapper along with the Amendment, therefore, we are re-submitting these documents.

Respectfully Submitted,

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STATEMENT

I, Makoto KONDO, of c/o NGB Corporation, Toranomon East Bldg. 7-13, Nishi-Shimbashi 1-chome, Minato-ku, Tokyo 105-8408 Japan, hereby state that I am conversant with both the English and Japanese languages and certify to best of my knowledge and belief that the attached is a true and correct English translation of the priority document of Japanese patent application 2003-098913 filed on April 2, 2003.

Date: November 24, 2006

近藤 誠

Makoto KONDO

2006/11/24

1

JAPAN PATENT OFFICE

This is to certify that the annexed is a true copy of the following application as filed with this Office.

Date of Application: April 2, 2003

Application Number: Patent Application No. 2003-098913

Applicant(s): FUJI JUKOGYO KABUSHIKI KAISHA

April 8, 2004

Commissioner,  
Japan Patent Office Yasuo IMAI  
Issuance No. 2004-3029004

[DOCUMENT NAME] REQUEST FOR PATENT APPLICATION  
[REFERENCE NUMBER] 0302F21403  
[FILING DATE] April 2, 2003  
[ADDRESSEE] COMMISSIONER OF PATENT OFFICE, ESQ.  
[IPC] B60K15/00

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[LIST OF FILING ITEMS]  
[NAME OF ITEM] SPECIFICATION 1  
[NAME OF ITEM] DRAWING 1  
[NAME OF ITEM] ABSTRACT 1

[GENERAL ATTORNEY NUMBER] 9805686

[REQUIREMENT OF PROOF] REQUIRED

[Designation of Document] Specification  
[Title of the Invention] Fuel tank structure  
[Claim(s)]

[Claim 1] A fuel tank structure characterized by providing a working position display portion of a waste fuel hole at an outer surface thereof in correspondence with a fuel remaining portion.

[Claim 2] The fuel tank structure according to Claim 1, characterized in that the working position display portion is installed in a mode right below a chamber module arranged at inside of a fuel tank and surrounding a surrounding of the chamber module.

[Claim 3] The fuel tank structure according to Claim 1 or 2, characterized in that the working position display position is a bead portion formed by projecting a predetermined amount thereof to an inner side of the fuel tank.

[Claim 4] The fuel tank structure according to any one of Claims 1 through 3, characterized in that the bead portion is constituted by a plurality of noncontinuous bead portions.

[Detailed Description of the Invention]

[0001]

[Technical Field to which the Invention Belongs]

The present invention relates to a fuel tank structure used in a vehicle of, for example, an automobile or the like and provided for storing a liquid fuel of gasoline or the like.



[0002]

[Prior Art]

Although a vehicle of an automobile or the like is installed with a fuel tank for storing and supplying gasoline or the like which is a fuel, leakage of a fuel having high volatility and flammability is extremely dangerous for operation of scrapping a used vehicle and therefore, it is requested to draw out a total amount of the fuel from the fuel tank prior to the scrapping operation. Generally, in order to draw out the fuel of gasoline or the like from the fuel tank, a hole is bored at a bottom face or the like of the fuel tank by a drill or the like in a spear-like shape and in recent years, chamber module formation including a fuel pump or the like is progressed, an inner structure of the fuel tank is complicated and in order to firmly draw out the total amount of the fuel, a scrapping efficiency is liable to be lowered and also an operational environment is liable to be deteriorated and a problem remains also in view of safety. Hence, there has been proposed a processing facility for drawing out a fuel in scrapping such a used vehicle (refer to, for example, Patent Reference 1, shown below).

[0003]

[Patent Reference 1]

JP-A-10-230822 (paragraph 0011)

[0004]

A simple explanation will be given of Patent Reference

1, described above, in reference to Fig. 4. A fuel receiving vessel 17 is moved up and down by a base seat 13, when the fuel receiving vessel 17 is moved up, the fuel receiving vessel is brought into close contact with a fuel tank 20 by a sealer 19, further, a spear-like penetrating piece 18 is moved up and down by a piston 15, and when the spear-like penetrating piece 18 is moved up, the spear-like penetrating piece 18 penetrates the fuel tank 20 to open a hole and a remaining fuel at inside of the fuel tank 20 is drawn out to the fuel receiving vessel 17. The drawn-out fuel is recovered from a drawing port 11 of the fuel receiving vessel 17 to a recovery tank 27 via a pipe 24 and a valve 22.

[0005]

When a fuel level of the recover tank 27 reaches a previously determined level, the valve 22 is closed by a level member 23. Further, nitrogen gas is supplied from a nitrogen gas bomb 14 to the fuel tank 20 via a valve and a colder 25 and supplied to the fuel receiving vessel 17 via the pipe 24 and the valve 22 to thereby purge by nitrogen gas. A gas concentration measuring instrument 16 measures a gas concentration at inside of the fuel tank 20 in order to advance to a next station after confirming that a gas of the fuel is sufficiently reduced.

[0006]

[Problems that the Invention is to Solve]

By such a processing facility of a used vehicle (old vehicle), the fuel can efficiently and safely be drawn out at inside of an independent building facility of a fire resistant structure or the like. However, such a processing facility needs a large-scaled facility and requires an enormous expense, further, in order to bore a fuel drawing hole at an optimum position of the fuel tank 20 (a position of installing a chamber module including a fuel pump or the like which is easy to store a remaining fuel or the like) in correspondence with various specifications of fuel tanks, a position of the piston 15 above the base seat 13 needs to incessantly control to move and still the operational efficiency cannot be regarded to be sufficient.

[0007]

Hence, it is an object of the invention to provide a fuel structure resolving the various problems in the processing facility of the used vehicle of the prior art and capable of drawing out a total amount of a fuel by boring a fuel drawing hole at an optimum position firmly and easily under a high rigidity without needing a special facility.

[0008]

[Means for Solving the Problems]

For that purpose, the invention is characterized by providing a working position display portion of a waste fuel hole at an outer surface in correspondence with a fuel remaining portion. Further, the invention is characterized by installing

the working position display portion right below a chamber module arranged at inside of a fuel tank and in a mode surrounding a surrounding of the chamber module. Further, the invention is characterized in that the working position display portion is a bead portion formed by projecting a predetermined amount thereof to an inner side of the fuel tank. Further, the invention is characterized in that the bead portion is constituted by a plurality of noncontinuous bead portions, a position of installing the chamber module or the like at which a remaining fuel is liable to be stored is easily recognized by the working position display portion and the fuel drawing hole is firmly bored to thereby enable to draw out a total amount of the fuel. Further, by constituting the working position display portion by a bead structure, positioning in integrating the chamber module or the like is facilitated and further, a rigidity in boring the fuel drawing hole is ensured and boring operation is facilitated.

[0009]

[Embodiments]

An explanation will be given of embodiments of the invention in reference to the drawings as follows. Fig. 1 and Fig. 2 show a first embodiment of a fuel tank structure of the invention, Fig. 1(A) is a total sectional view of a fuel tank, Fig. 1(B) is a plane view of a working position display portion, Fig. 1(C) is a sectional view of the working position display

portion, and Fig. 2 is a total perspective view of the fuel tank. As shown by Fig. 1(A), a basic structure of the invention is characterized in providing a working position display portion 5 of a waste fuel hole at an outer surface (which is a bottom portion constituting the lowest position and preferably a position of a chamber module 2) of a lower member 4 in correspondence with a fuel remaining portion in a fuel tank structure constituted by an upper member 3 and the lower member 4.

[0010]

A detailed description will be given as follows. A constitution of the embodiment is applied to a fuel tank of a normal type formed with a single one of a bottom portion 4A constituting the lowest position, a fuel tank 1 is constituted by bonding the upper member 3 and the lower member 4 respectively having different shapes and molded by separate steps by welding or the like at a butting peripheral edge 1A and prior thereto, a bead portion 5 is formed at the bottom portion 4A constituting the lowest position in the lower member 4. As shown by Fig. 1(C), preferably, the bead portion 5 is formed by projecting a predetermined amount  $t$  to an inner side of the fuel tank to constitute a display function and ensure a rigidity and prevent the display function from being deteriorated even by coating an undercoat and formed in a shape of a divided ring as shown by Fig. 1(B). In the illustrated example, the bead portion

5 is constituted by a first bead portion 5A, a second bead portion 5B and a third bead portion 5C in a mode of arrow marks divided in three (signifying recycle). Therefore, cut portions 7 are formed among the respective bead portions 5A, 5B, 5C.

[0011]

In fabricating the fuel tank 1 by bonding the lower member 4 having the bead portion 5 formed in this way and the upper member 3, a lower end portion of the chamber module 2 installed at the upper member 3 and containing a fuel pump or the like is set to proper position to the bead portion 5 in the ring-like shape. Normally, a predetermined clearance is set between a lower face of the chamber module 2 and the lower member 4. Further, notation 2A in Fig. 1(A) designates a fuel pipe for supplying fuel to a side of an engine and notation 2B designates a vent pipe connected to a vent line. In using the fuel tank

~~in the vehicle, the fuel at inside of the fuel tank 1 is introduced~~  
to the fuel pump, not illustrated, via a side wall, a hole of the lower face of the chamber module 2, and supplied to the side of the engine via the fuel pipe 2A and a high pressure gas by temperature rise at inside of the fuel tank 1 is introduced to a canister or the like at the vent line via the vent pipe 2B.

[0012]

A used vehicle finished with a mission as a vehicle is scrapped and it is necessary to draw out a total amount of the

fuel from the fuel tank 1 since there is a concern of inflaming a remaining fuel in scrapping the vehicle. According to the embodiment, there is formed the working position display portion 5 for specifying / clearly indicating a position of the outer surface of the bottom portion 2A constituting the lowest position of the lower member 4 in correspondence at least with the fuel remaining portion, preferably, the position of the chamber module 2 (arranged with one way valve or the like other than a fuel pump and the remaining fuel is difficult to be discharged) and therefore, operation of boring a waste fuel hole by a drill 6 in a spear-like shape may be carried out as shown by chain lines of Fig. 1(A).

[0013]

At this occasion, when the working position display portion 5 is provided with the bead structure molded by projecting the predetermined amount  $t$ , the bottom portion 4A to be bored can be ensured with a predetermined rigidity and the boring operation can firmly be carried out. Thereby, the fuel can be drawn out via the waste fuel hole from the bottom portion of the chamber module 2 at which the remaining fuel is liable to be stored. Further, also the remaining fuel stored to the bottom portion 4A on an outer side of the bead portion 5 is made to flow to the side of the waste fuel hole via the cut portions 7 among the respective bead portions 5A, 5B, 5C constituted to divide and the remaining fuel can firmly be drawn

out. Further, although the working position display portion 5 is formed to project to inside of the fuel tank 1 by the predetermined amount  $t$ , the working position display portion 5 is formed to surround the chamber module 2 and therefore, the chamber module 2 is not hampered from being arranged at a vicinity of the lower face of the fuel tank 1.

[0014]

Fig. 3 shows a second embodiment of a fuel tank structure according to the invention, Fig. 3 (A) is a total sectional view of a fuel tank and Fig. 3 (B) is a plane view of a working position display portion. The embodiment is an example of being applied to a saddle type tank capable of ensuring a predetermined effective remaining amount of a fuel. The fuel tank 1 of the embodiment shows a saddle type section in which the bottom portion of the lower member 4 includes two bottom portions of a first bottom portion 4A and a second bottom portion 4B.

According to the saddle type fuel tank, even when the fuel on the side of the first bottom portion 4A arranged with the chamber module 2 for containing the fuel pump or the like is exhausted in running, the predetermined effective remaining amount can be ensured on the side of the second bottom portion 4B and therefore, in emergency, the remaining fuel on the side of the second bottom portion b can be sucked by a fuel pump or the like to be provided to combustion by switching a cock or the like.



[0015]

According to the embodiment, the working position display portion 5 for the waste fuel hole is formed at the lower member 4 in correspondence with the lowest position in correspondence with the fuel remaining portion also on the side of the second bottom portion 4B. Preferably, similar to the working position display portion 5 in the first bottom portion 4A, there is constituted a bead portion formed by projecting a predetermined amount thereof to the inner side of the fuel tank. The structure of the chamber module 2 and the bead portion 5 constituting the working position display portion on the side of the first bottom portion 4A is similar to that of the above-described first embodiment and therefore, an explanation thereof will be omitted. Since the constitution is constructed in this way, other than achieving an effect similar to that of the above-described first embodiment, also with regard to the side of the second bottom portion 4B capable of ensuring the predetermined effective remaining amount, the waste fuel hole can be recognized and the boring operation can easily be carried out for drawing out the remaining fuel.

[0016]

Although an explanation has been given of the respective embodiments of the invention as described above, within the range of the gist of the invention, there can pertinently be selected the shape of the fuel tank (A pertinent divided mode

can be adopted other than the mode of dividing the upper member and the lower member upwardly and downwardly. Further, a constitution relating to a main portion and the bottom portion of the tank can pertinently be adopted.), the type (having a single one of the bottom portion, a saddle type having two bottom portions or the like), the shape of the working position display portion of the waste fuel hole (Other than the three arrow marks signifying recycle in a bead shape projected to the inner side of the tank, a pertinent shape provided with cut portions can be adopted. Further, there can be constructed a constitution of being mounted with the bead portion projected to the outer side (lower side in the drawing) as the working position display portion and a positioning auxiliary member of the chamber module on the inner side of the tank of the bead portion. Further, when ineffective remaining of the fuel is to a degree of being ~~able to be disregarded~~, a continuous bead portion can be constituted without being divided), further, when it is not necessary to take into account the rigidity in the boring operation, the working position display portion may not be constituted by the projected bead portion) and the like. Further, the working position display portion of the waste fuel hole may be provided on the outer surface at a portion at which the fuel at inside of the fuel tank is liable to remain in accordance with the shape of the fuel tank, the position of the fuel pump or the like also at other than right below the

chamber module or the bottom portion of the fuel tank.

[0017]

Further, there can pertinently be selected the shape of the chamber module (a square cylindrical shape, a spherical shape or the like other than the circular cylindrical shape), the type (the mode of arranging the fuel pump and the one way valve or the like), the constitution related to the working position display portion of the bead portion or the like (other than being positioned as dimensions of respective portions such that the chamber module is matched to the inner side of the bead portion in the ring-like shape without excess and deficiency, or after setting to position the lower end edge of the chamber module by being guided by an inclined face of the bead portion, the bead portion may be constituted to be arranged at the surrounding of the chamber module with more or less allowance), the amount of projecting the bead portion as the working position display portion, a mode of catching the fuel drawn out via the waste fuel hole and the like.

[0018]

[Effect of the Invention]

As has been described in details, according to the invention, by providing the working position display portion of the waste fuel hole at the outer surface in correspondence with the fuel remaining portion, the position of the portion at which the remaining fuel is liable to remain can clearly

be recognized and the boring operation of the waste fuel hole by the drill or the like in the spear-like shape can easily be carried out.

[0019]

Further, when the working position display portion is installed in the mode right below the chamber module arranged at inside of the fuel tank and surrounding the surrounding of the chamber module, the position of the chamber module at which the remaining fuel is liable to remain can easily be recognized from outside and the boring operation of the waste fuel hole along with the chamber module can easily be carried out by the drill or the like in the spear-like shape. Further, when the working position display portion is the bead portion formed by projecting the predetermined amount to the inner side of the fuel tank, the bead portion can be utilized as the positioning member in integrating the chamber module or the like, the boring operation can firmly be carried out by ensuring the predetermined rigidity at the bottom portion to be bored and the fuel can be drawn out from the bottom portion of the chamber module at which the remaining fuel is liable to be stored via the waste fuel hole.

[0020]

Furthermore, when the bead portion is characterized by being constituted by the plurality of noncontinuous bead portions, also the remaining fuel stored to the bottom portion

on the outer side of the bead portion is also made to flow to the side of the waste fuel hole via the cut portions among the noncontinuous bead portions and the remaining fuel can firmly be drawn out. In this way, there can be provided the fuel tank structure capable of drawing out the total amount of the fuel by boring the fuel drawing hole at the optimum position firmly and easily under the high rigidity without needing a special facility.

[Brief Description of the Drawings]

[Figure 1]

Fig. 1 shows a first embodiment of a fuel tank structure of the invention, Fig. 1 (A) is a total sectional view of a fuel tank, Fig. 1 (B) is a plane view of a working position display portion, and Fig. 1 (C) is a sectional view of the working position display portion.

[Figure 2]

Fig. 2 is a total perspective view of the fuel tank of the same.

[Figure 3]

Fig. 3 shows a second embodiment of a fuel tank structure of the invention, Fig. 3 (A) is a total sectional view of a fuel tank, and Fig. 3 (B) is a plane view of a working position display portion.

[Figure 4]

Fig. 4 is an example of a prior art of a processing facility

for drawing out a fuel.

[Description of Reference Numerals and Signs]

- 1 Fuel tank
  - 1A Peripheral edge
- 2 Chamber module
  - 2A Fuel pipe
  - 2B Vent pipe
- 3 Upper member
- 4 Lower member
  - 4A First bottom portion
  - 4B Second bottom portion
- 5 Working position display portion (bead portion)
  - 5A First bead portion
  - 5B Second bead portion
  - 5C Third bead portion
- 6 Drill
- 7 Cut portion
- t Projected amount

[Designation of Document] Abstract

[Abstract]

[Problem] It is an object of the invention to provide a fuel tank structure capable of drawing out a total amount of a fuel by boring a fuel drawing hole at an optimum position firmly and easily under a high rigidity without needing a special facility.

[Means for Resolution] A fuel tank structure constituted by an upper member 3 and a lower member 4 characterized in that a working position display portion 5 of a waste fuel hole is provided at an outer surface of the lower member 4 in correspondence with a fuel remaining portion and operation of boring the waste fuel hole by a drill 6 or the like in a spear-like shape can easily be carried out by clearly recognizing a position of a portion at which remaining fuel is liable to remain.

[Selected Drawing] - - Fig. 1

提出日 平成15年 4月 2日

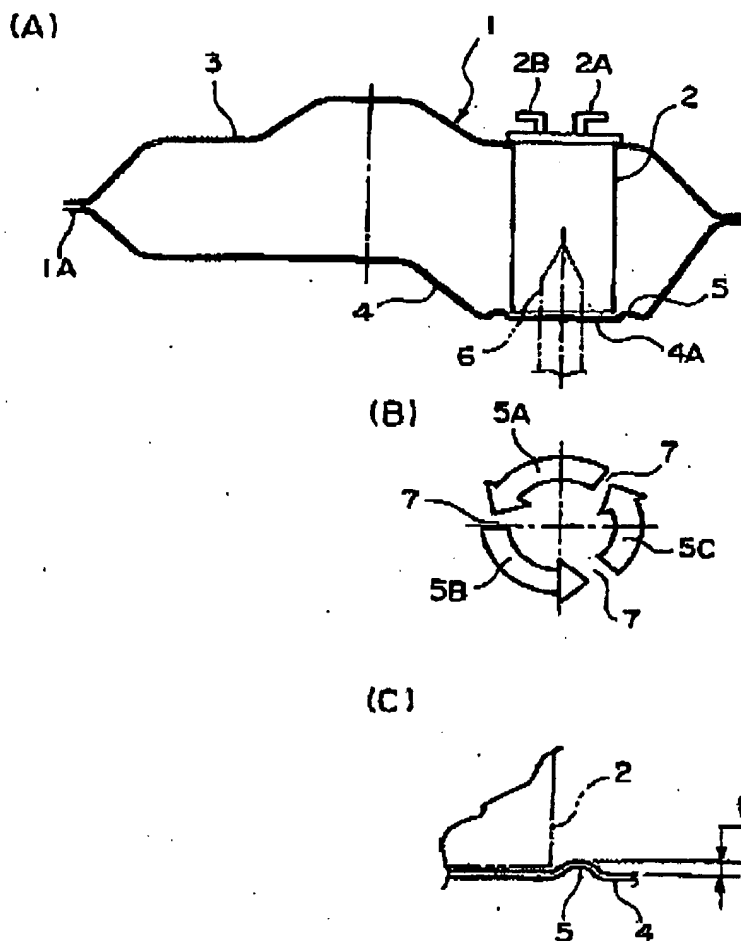
整理番号=0302F21403

特願2003-098913

頁: 1/ 4

【書類名】 図面 [Document Name] Drawings

【図1】 FIG. 1





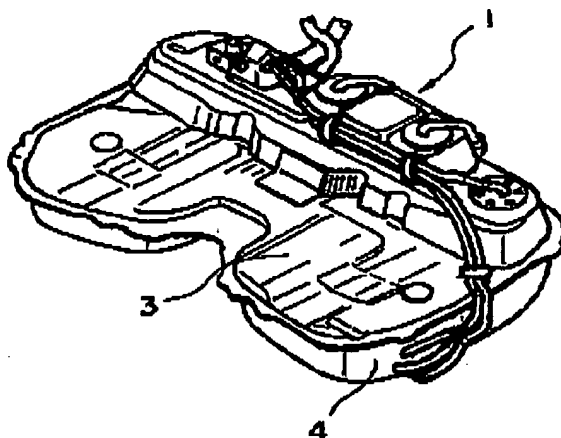
提出日 平成15年 4月 2日

整理番号=0302F21403

特願2003-098913

頁: 2/ 4

【図2】 FIG.2



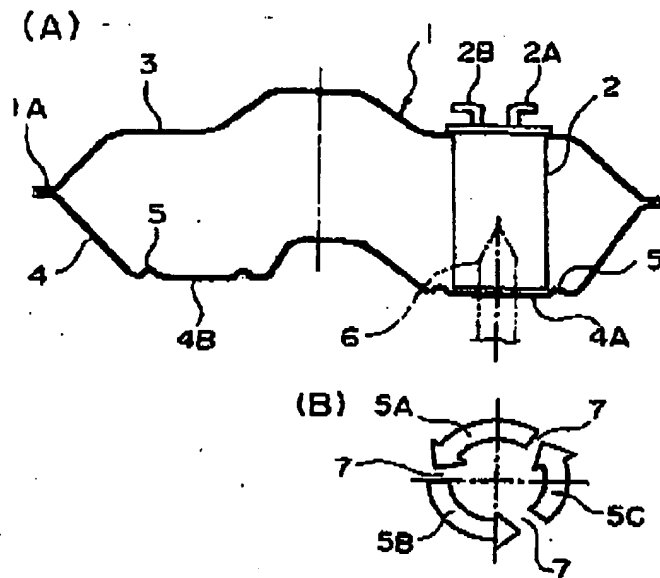
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頁: 3/ 4

【図3】 FIG.3



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特願2003-098913

頁: 4/ 4

【図4】 FIG.4

